

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION

Effective December 1, 2012

RC-353

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **December 2016**.*

*This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.*

*This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.*

**Polyfoam 273 Spray Applied Polyurethane Foam Roof Systems (SPUF)** manufactured by

**Gaco Western**  
**200 W. Mercer Street, Suite 201**  
**Seattle, WA 98109**  
**(206) 575-0405**

is acceptable for use in designated catastrophe zones along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

## PRODUCT DESCRIPTION

**Polyurethane Foam Plastic Insulation:** Gaco RoofFoam 273 spray applied two component polyurethane foam insulation that complies with ASTM C-1029 with a nominal density of 2.7 lb/ft<sup>3</sup> intended for roof applications.

**Coatings:** The foam is covered with one of the following elastomeric coatings to form a continuous membrane:

GacoFlex S-20 (GacoSil S-20) series of single component petroleum free silicone water cure silicone rubber coating. The coating is available in S-2000 (white), S-2022 (gray), S-2048 (tan), and custom colors. This product can be applied by brush, roller or spray applied.

GacoFlex S-10 (GacoSil S-10) series of single component silicone water cure silicone rubber coating. The coating is available in S-1000 (white), S-1022 (light gray), S-1048 (tan), and custom colors. This product can be applied by brush, roller or spray applied.

GacoRoof S-16 series is a single component silicone elastomeric membrane roof coating that is brush, roller and spray applied. The coating is available in GR-1600 (white), GR-1628 (gray), GR-1626 (green), GR-1670 (light tan), GR-1671 (rustic), GR-1672 (medium blue), GR-1673 (black), GR-1674 (brown), GR-1675 (red).

**Roof Deck:** The spray-applied polyurethane foam systems may be applied to concrete and steel substrates. Refer to the approved assemblies for description of acceptable substrates.

## LIMITATIONS

**Design Wind Pressures:** The Gaco Western spray-applied polyurethane foam roof covering systems, when installed in accordance with this evaluation report, shall have the allowable uplift wind pressure specified in each assembly.

**Roof Slope:** The roof decks shall have a minimum slope of  $\frac{1}{4}$ " in 12".

**Installation Over an Existing Roof Covering:** Installation of the Gaco Western spray-applied polyurethane foam roof systems over an existing roof covering is not within the scope of this evaluation report.

**Spray-applied Polyurethane Foam Product Identification:** Each container of polyurethane foam plastic insulation bears a label with Gaco Western name and address; the product name; the component type; the density; the shelf life; and the manufacture date.

**Application Conditions:** Gaco Western SPF systems shall not be applied if the ambient temperature is expected to fall below 50 degrees F, the ambient temperature is within 5 degrees F of the dew point, or if rain is expected before the application has time to cure. The coating must not be applied when dew, condensation, precipitation or freezing temperatures are anticipated prior to completion of the coating application.

## INSTALLATION INSTRUCTIONS

**General:** All International Residential Code (IRC) and the International Building Code (IBC) requirements must be satisfied and manufacturer's installation instructions followed, unless otherwise specified by this product evaluation.

**Roof Deck:** The roof deck may be concrete and steel. The decks must be free of all grease, oil, loose particles, moisture and other foreign materials. Primers shall be applied in accordance with the manufacturer's installation instructions. All primers must be thoroughly dry and cured prior to foam application.

## CONCRETE DECK ASSEMBLIES

### Assembly No. 1:

**Design Pressure:** -435 psf

**Roof Deck:** Minimum 2500 psi primed structural concrete.

**Foam Application:** A minimum of 1" thickness Gaco RoofFoam 273 spray applied polyurethane over the insulation board. The polyurethane foam plastic insulation is applied in a 1:1 ratio by volume of the A and B components using foam spraying equipment recommended by Gaco Western LLC.

**Coating:** The coating must be one of the following:

1. GacoFlex S-20 series at an application rate of 1.5 gallons per 100ft<sup>2</sup>;
2. GacoFlex S-10 series at an application rate of 2.2 gallons per 100ft<sup>2</sup>; or
3. GacoRoof S-16 series at an application rate of 2.1 gallons per 100ft<sup>2</sup>.

## STEEL DECK ASSEMBLIES

### Assembly No. 2:

**Design Pressure:** -105 psf

**Roof Deck:** Minimum 22 gauge, 80 ksi steel deck with a maximum span of 6'-0".

**Foam Application:** The deck flutes are filled with RoofFoam 273 spray applied polyurethane. RoofFoam 273 spray applied polyurethane is applied over the top of the ribs to a thickness of 1 inch. The polyurethane foam plastic insulation is applied in a 1:1 ratio by volume of the A and B components using foam spraying equipment recommended by Gaco Western LLC.

**Coating:** The coating must be one of the following:

1. GacoFlex S-20 series at an application rate of 1.5 gallons per 100ft<sup>2</sup>;
2. GacoFlex S-10 series at an application rate of 2.2 gallons per 100ft<sup>2</sup>; or
3. GacoRoof S-16 series at an application rate of 2.1 gallons per 100ft<sup>2</sup>.

**Note:** Manufacturer's installation instructions shall be available on the job site during the application process. Only accredited applicators certified by Bayer Material Science LLC shall be allowed to perform the application. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.